



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,995	07/11/2001	Nuggehally S. Jayant	07815.105002	1924

20786 7590 07/12/2004

KING & SPALDING LLP
191 PEACHTREE STREET, N.E.
ATLANTA, GA 30303-1763

EXAMINER

VO, TUNG T

ART UNIT	PAPER NUMBER
----------	--------------

2613

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/902,995

Applicant(s)

JAYANT ET AL.

Examiner

Tung T. Vo

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16, 34-46 and 51 is/are allowed.
- 6) ☒ Claim(s) 17-29, 31-33 and 47-50 is/are rejected.
- 7) ☒ Claim(s) 30 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 17-33, and 47-50 are rejected under 35 U.S.C. 102(e) as being anticipated by Westerman (US 6,091,767).

Re claims 17-33, and 47-50, Westerman teaches method (figure 2) for calculating an optimum display size for a visual object comprising the steps of: compressing a visual object with a visual object encoder (50 of fig. 2); determining the optimum display size for the visual

Art Unit: 2613

object based on at least one of a coding difficulty value (DCT and quantization, see col. 8, lines 3-65, the size of the image is determined for encoding using a coding difficulty) and a visual object transmission rate (66 of fig. 2, see also col. 6, lines 40-58); and displaying a message indicating the optimum display size for the encoded visual object (56 of fig. 2, see also col. 7, lines 1-25); wherein the step of determining an optimum display size further comprises the step of evaluating one of a quality of the display device and a size of the display device (col. 7, lines 1-24), further comprising the step of automatically displaying the visual object with the optimum display size (LCD is automatically displaying an decoded image with the best display size that is fit in the LCD type); further comprising the step of displaying the visual object with the optimum display size in response to a user command (col. 6, lines 47-53); the step of displaying a message indicating the optimum display size for the encoded visual object (56 of fig. 2, note send the parameters to the encoder 70 of fig. 2), a network computer is a wireless transmission (52 of fig. 2), step size is quanization step size (Q) (see col. 8).

4. Claims 40-46 are rejected under 35 U.S.C. 102(e) as being anticipated by Hiroi (US 6,204,887 B1).

Re claims 40-46, Hiroi teaches a system for calculating an optimum display size (156', 152, 117 of fig. 2B) for a visual object comprising:

an decoder (114 of fig. 2B) for decompressing a visual object, for calculating a step size (152' of fig. 2B, note parameters control calculates a step size, quantization step size) for a predetermined number of frames of the visual object (frame type detector is detecting the

predetermined number of frames), for estimating a coding difficulty value (decoder (114) estimating the coding difficulty) as a function of step size;

a display size selector (117 and 118 of fig. 2B) for determining an optimum display size of the visual object based on the estimated coding difficulty value and a visual object transmission rate; and a display device (134 of fig. 2B) for displaying a message indicating the optimum display size for the encoded visual object.

Re claim 41, Hiroi further discloses a visual object render (132 of fig. 2B) for generating the decompressed visual object.

Re claim 42, Hiroi further disclose an audio decoder (120 of fig. 2B) and an audio/video system de-multiplexer (112 of fig. 2B).

Re claim 43, The system of claim 40, wherein the decoder estimates a harmonic mean of a peak to noise ratio for a predetermined number of frames of the visual object.

Re claim 44, Hiroi further discloses wherein the display size selector (117 and 118 of fig. 2B, note the controller (118) is controlling the display sizes calculated by the video scalar for a particularly windows) determines the optimum display sized based upon an empirically derived relationship between the coding difficulty value and the visual object transmission rate (105, 156', and 152 of fig. 2B, note the parameter controller calculates the coding difficulty value and the transmission rate in order to decoding video image).

Re claim 45, Hiroi further discloses wherein the visual object comprises one of a graphical image and video (wherein the video contains a closed caption, which is a graphical, and video).

Re claim 46, Hiroi further discloses the step of displaying a message indicating the optimum display size for the visual object (134, 304, 306, and 308 of fig. 3B).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-11, 13-16, 34-39, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroi (US 6,204,887 B1) in view of Kanazawa et al. (US 5,072,297).

Re claims 1-11, 13-16, 34-39, and 51, Hiroi teaches a system for calculating an optimum display size (156', 152, 117 of fig. 2B) for a visual object of a television signal or video signal comprising the step of calculating a step size (152' of fig. 2B, note parameters control calculates a step size, quantization step size) for a predetermined number of frames of the visual object (frame type detector (156' of fig. 2B) is detecting the predetermined number of frames), for estimating a coding difficulty value (a parameter control (152 of fig. 2B) is to estimate the coding difficulty) as a function of step size a display size selector (117 and 118 of fig. 2B) for determining an optimum display size of the visual object based on the estimated coding difficulty value and a visual object transmission rate; and a display device (134 of fig. 2B) for displaying a message indicating the optimum display size for the encoded visual object, wherein the television signal or a video signal transmitted by a wireless tunnel (106'' of fig. 2B).

Hiroi further teach wherein the display size selector (117 and 118 of fig. 2B, note the controller (118) is controlling the display sizes calculated by the video scalar for a particularly windows) determines the optimum display sized based upon an empirically derived relationship between the coding difficulty value and the visual object transmission rate (105, 156', and 152 of fig. 2B, note the parameter controller calculates the coding difficulty value and the transmission rate in order to decoding video image), wherein the visual object comprises one of a graphical image and video (wherein the video contains a closed caption, which is a graphical, and video); the step of displaying a message indicating the optimum display size for the visual object (134, 304, 306, and 308 of fig. 3B).

It is noted that Hiroi does not disclose compressing a visual object with a visual object encoder, the step of calculating signal to noise ratios for set of frames of the visual object, an audio/video multiplexer as claimed.

However, Kanazawa teaches compressing a visual object with a visual object encoder (1 of fig. 1A), the step of calculating signal to noise ratios for set of frames of the visual object (fig. 3), an audio/video multiplexer (4 of fig. 1A). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate the visual object encoder, the audio/video multiplexer for calculating signal to noise ratios (1, 2, and 4 of fig. 1A) into the system of Hiroi for maintaining high fidelity for a TV audio signal when the improved signal-to-noise ratio of a transmission medium.

7. Claims 12 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroi (US 6,204,887 B1) in view of Kanazawa et al. (US 5,072,297), and further in view of Kim (US 5,649,052).

Re claims 12 and 43, the combination of Hiroi and Kanazawa does not particularly teach a harmonic mean of a peak to noise ratio for predetermined number frames of the visual object as claimed. However, Kim teaches a harmonic mean of a peak to noise ratio for predetermined number frames of the visual object (col. 1, line 42-col. 2, line 17). Therefore, it would have been obvious to one of ordinary skill in the art to modify the teachings of Kim into the combined system of Hiroi and Kanazawa for the same purpose of determine a peak to noise ratios for predetermined frames. Doing so would reduce an error signal during transmission.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ohira et al. (US 6,208,689 B1) discloses a method and apparatus for digital image decoding.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung T. Vo whose telephone number is (703) 308-5874. The examiner can normally be reached on 6:30 AM - 3:00 PM.

Art Unit: 2613

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris. Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Primary
TUNG T. VO
PATENT EXAMINER
T.Vo

Tung T. Vo
Primary Examiner
Art Unit 2613